

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: ljones@why.net (ljones)
Subject: [1259]-.
Message-ID: <19960719072807679.AAB131@16.ann1.dal.why.net>

Greetings Gang...

While we're at it, I have a question. Why do a large majority of CW operators insist on sending a dash (-...-) in between sentences. They sometimes sent it two or three times. To me it is like using ah in a ssb conversation, totally useless. Something to keep the mike/freq open while you try and think of something else to say. Why can't you just pause. Does every iota of space have to be filled with something. I find it distracting myself. Off my soap box...

72/73

dee-it dee-it

Larry Jones N50SG <><	NORTEX	QRP-ARCI	G-QRP	MI-QRP	CQC
4028 Random Circle	NorCal	NE-QRP	QRP-L	ARRL	NTMS
Garland Tx 75043-3250	EM12QU	96.62 W LONG	32.87 N LAT		

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dean Marzocca <n2tnn@ifu.net>
Subject: [1305] 40 meter/MM
Message-ID: <31F00DC2.39EF@ifu.net>

Hi all,

I am just packing the truck and heading down to the boat. I will be on the air around 7.040 tonight and hope to be on again tomorrow morning until 10 am east coast time. It will only be marine mobile but I have no plans for the afternoon. You never know where I will end up.

Give a call or listen and happy to make contact.

72, Dean

--

"HAM IT UP" 30 FT Cabin Cruiser via Barneget Bay, New Jersey
N2TNN FN20, Somerset, NJ // 10 meter BOATMOBILE // 40 M QRP/BOATMOBILE
WAS- MI,MO
BOATMOBILE/WAS- MA,VA,OH,CT,TN
NJ-QRP#36, NORCAL#1239, QRP-L#560

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dale Anderson <dalea@artemis.fc.hp.com>
Subject: [1298] 49'er TX Offset and other mods...
Message-ID: <199607192132.AA230461946@artemis.fc.hp.com>

Hi Everyone,

Below are the mods I've done to my 49'er so far...

Regards,
-Dale

Disclaimer: Don't ask me, I'm a software engineer.

TX Offset:

In my initial measurements using a freq counter and my Yaesu, I determined I had NO offset between TX and RX. This made copying CW impossible if someone perfectly zero-beat my signal. After querying the list and reading all the mods in NorCal's page, I still hadn't come up with a stable TX offset, nor could anyone explain how the claimed 100Hz offset was supposed to occur in the original design. I devised a way to do it but at the expense of some (lots of) tuning BW.

- Swapped places with C6 and RFC6 to make my off-board C6 (BC-Band variable) less "hand capacitance" sensitive". This also required relocating C21 so that it would remain || to C6. This required drilling a hole in the pcb for C21 to ground. Since I am using an off-board C6, I used RFC6's original ground hole to connect that to. Having previously trimmed RFC6's leads, I had to install it diagonally to make it reach the holes.
- Installed a 6-20pF trimmer between the inductor side of C6 and 'K'. This provides me with an adjustable offset.

Results:

Now, instead of having 5KHz tuning range, it's more like just 400Hz. Oh well, but I now have an adjustable offset of up to 100Hz.

Future Plans:

Investigate reengineering the osc design, including my

offset mod, to improve the tuning range.

BC Stn Interference:

Like others, my 49'er was plagued by out-of-band SW BC QRM. Reading the mods posted to QRP-L, I learned the front-end tank was not tuned to my segment. I verified this with a calculator. At the risk of sacraficing some of the tank Q, I utilized components available to me (ie, from "the junk box").

- I removed C20.
- Replaced the 2.2uH RFC1 with one of 56uH.
- Then adjusted C2 for strongest in-band signal measured with a 'scope on the hot-side of RFC1. This should theoretically occur around 9pF for 7.122Mhz.

Results:

Though the problem hasn't gone away completely (possibly due to a low circuit Q), it has been GREATLY reduced.

Future Plans:

Will attempt to improve the circuit Q, using a different and HI-Q LC ratio.

PWR Boost:

My measured RF output with 12v was about 150mW. Tho' I've had great success (with another rig) working at that level, I wanted to have the option of increasing my output to something more without drawing more current during RX. I found that by pulling on the bias of pin-7 of U1 during TX, I could increase the output of the osc.

- Ran a 2.2K Ohm between pin7 of U1 and the anode of D2. This resistor is laying flat on the solder side of the board, tac-soldered in place.

Results:

My output is now 600mW. That's a 400% increase!
Not a bad start.

Future Plans:

Investigate TX amp stage impedance design to ensure matching and maximum thru-put. From what I've read,

there's room for added gain here.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Charles Cashion <sun1055!ccashion@uunet.uu.net>
Subject: [1273] 50 cal ammo box revisited
Message-ID: <9607191429.AA11276@sun1055.spd.dsccc.com>

"James C. Owen, III" <owen@apollo.eeel.nist.gov> wrote (jo>)
jo>
jo> Don't forget about using 50 caliber Ammo Boxs.
jo> Can be found at most surplus stores at less than \$6.00.
jo> ---6 lines deleted---
jo>

Been there.
Done that.

I use ammo boxes for other things.
(...tool boxes, parts boxes, etc.)

Ammo boxes have square sharp corners.
They will cut their way thru any canvas backpack.

72s, 73s, whatever it takes,
Charles W5ISZ Cashion
--

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: kimitsuka_glen <glenk@dsg.tandem.com>
Subject: [1293] Antenna Tuner Designs?
Message-ID: <9607191854.AA17273@sid1.dsg.tandem.com>

Hi All;
I have a few generic replacement 10-365pf air variable caps for the old
five tube radios. Anyone ever seen a tuner design based on these?
Something close I could adapt?

Tnx, Glen KM6WR

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: tmh@world.std.com

Subject: [1287] Better Packaging for 'Wilderness' Type Radios
Message-ID: <Pine.SGI.3.91.960719130354.14217C-100000@world.std.com>

Just my two cents-- I take my Cascade with me alot and I've found that those soft-sided nylon lunch boxes are very convenient. Especially the better ones that have thick foam insulation inside. They zip up pretty tight but I keep a folded up plastic shopping bag (the crinkly kind that are light) inside in case it rains so I can wrap everything up.

My Cascade sits nicely in one of these lunch coolers I got at CVS that also has a shoulder strap. All you do is unzip the top and the rig's control panel is facing you. There's also room for the rig's cell-phone battery, walkman headphones, a cardboard box with the other band module, and a complete list of all the ITU prefixes...The antenna and coax are coiled and hang from the shoulder strap.

I'd like to mount an antenna connector in the case, so I can open it (facing up) and plug in a loaded vertical. The ultimate goal is to be able to sling the whole thing over my shoulder so it's on my hip, and make QSO's while I'm hiking, i.e. 'pedestrian mobile.' Someday...

-- Tim, N1PAZ

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: ljones@why.net (ljones)
Subject: [1260] Book Test Equipment...
Message-ID: <19960719072807679.AAA131@16.ann1.dal.why.net>

Greetings Phil ...

The book in question is published by the RSGB. If Kanga doesn't have it, check with the ARRL. You can also call around to the various ham radio vendors as I got my copy from Tucker's or Texas Towers, I'm not sure which. But, do check other sources. Just FYI...

72/73

dee-it dee-it

Larry Jones N50SG <><	NORTEX	QRP-ARCI	G-QRP	MI-QRP	CQC
4028 Random Circle	NorCal	NE-QRP	QRP-L	ARRL	NTMS
Garland Tx 75043-3250	EM12QU	96.62 W LONG	32.87 N LAT		

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: k3as@dol.net (Bill Marsh)
Subject: [1280] C Cashion e-mail adr
Message-ID: <v01540b01ae156a93289a@[204.183.91.57]>

Charles I've been responding to your message directly but got bounced four times. How can I reach you? 73 Bill

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dan Keen <70731.722@compuserve.com>
Subject: [1309] Convert Rice Box to QRP!
Message-ID: <960720010922_70731.722_EHM40-1@CompuServe.COM>

Howdy,

I looked through the indexes of _QST_ to see if there was a mod for converting my TS850 from the front panel minimum drive setting of 20 Watts down to 5 watts. Sort of an instant QRP mod!

Well the February '93 _Hint and Kink_ column showed a modification that will convert a 20 watt output from any 50 Ohm radio into 5 watts. The author mentioned that it would also be like adding a bandspread to the drive control for easier power level setting, as well as being for reducing power output.

Well even the simplest schematics (I guess) won't go unjumbled over the text readers on the internet so here is the circuit in words:

FEBRUARY 1993 _QST_ page 75:

Run the coax coming out of the radio's antenna jack through a resistor network and then on to the one legged side of a standard UHF style "T" connector. On the double legged side of the "T" connector, connect the antenna to one leg and a 50 Ohm dummy load to the other leg.

The resistor network mentioned above is a series of three RADIO SHACK NUMBER RS 271-120 (8 Ohm non-inductive 20 Watt) resistors which are placed in the center conductor "side" of the coax line. The shield "side" of the coax goes straight from the radio to the "T", not through the resistors.

In other words the coax comes out of the radio, the center conductor "side " goes through a series of three 8 Ohm resistors, and then both "sides" of the coax runs on to the T connector and then to the paralled dummy load and antenna.

Remember, this will also take 6 db out of the signal on "recieve". The Kenwood TS-850 has a 6 and a 12 db attenuator on the front panel so its easy to forsee how much signal will be lost, not much.

However, if that seems like too much loss, the author also shows a very simple Radio Shack relay circuit for automatically switching this modification in and out of the line as the PTT line is being being grounded/ungrounded for transmit/recieve.

Dan

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: Paul Harden <na5n@Rt66.com>

Subject: [1311] DATA SHEET: Transistor subs

Message-ID: <199607200229.UAA28577@Rt66.com>

Gang,

There have been some questions lately about general purpose and power transistors, substitutions, etc. I started assembling a list of manufacturer recommended replacement/substitutions for the Data Book, which I just didn't have time to finish. I am attaching it below and hope you find it somewhat helpful. It is not complete and I have not updated it since April. I'll work on it in the future and repost later. In the meantime, feel free to email me with other known substitutions, or devices you'd like see included.

GL, Paul NA5N

----- cut here -----

DATA SHEET: TRANSISTOR SUBSTITUTIONS

CROSS REFERENCE CHART: COMMON BIPOLAR AND FET TRANSISTORS

* Transistors used in NorCal 40, NN1G, MFJ, etc. QRP rigs

INDUSTRY			PHILLIPS	ECG/NTE	TOSHIBA	MOTOROLA
2N2102	NPN	GPA	2N1893	ECG128	2SC1072	
2N2219	NPN	GPA		ECG123	2SC1385	MPS2219
*2N2222	NPN	GPA		ECG123A	2SC1707	MPS2222
*2N2222A	NPN	GPA		ECG123A	2SC1707A	

2N2894	PNP	MSS		ECG106	2SA562	
2N2905A	PNP	GPA		ECG129	2SA741	
*2N2907	PNP	GPA		ECG159M		MPS2907
*2N2907A	PNP	GPA		ECG159M	2SA1090	MPS2907A
2N3055	NPN	LPA		ECG130	2SC766	
*2N3553	NPN	RFPA		ECG473	2SC597	
*2N3866	NPN	RFA		ECG311	2SC845	
*2N3866A	NPN	RFA		ECG311	2SC845	
2N3904	NPN	GPA		ECG123AP	2SC3731	MPS2713
2N3905	PNP	GPA		ECG159	2SA781	
*2N3906	PNP	GPA		ECG159	2SA781	
2N4401	NPN	GPA		ECG123AP	2SC1071	MPS3565
2N4402	PNP	GPA		ECG159	2SA781	MPS5142
2N4403	PNP	GPA		ECG159	2SA781	MPS5138
2N4407	PNP	GPA	2N4033A	ECG129		
2N4410	NPN	GPA		ECG194		
*2N4416	NFET	RFA	PMBF4416	ECG452	2SK210	
2N5087	PNP	LNA		ECG159	2SA1015	
*2N5109	NPN	RFA	BFR95	ECG278	2SC821, 2SC823	
2N5179	NPN	RFA	BFY90			
2N5457	NFET	GPA	BF245A	ECG457	2SK46(SGD)	
2N5460	PFET	GPA		ECG326		
2N5462	PFET	GPA		ECG326		
*2N5484	NFET	RFA		ECG312	2SK104	
2N5485	NFET	RFA		ECG451	2SK2120B	
*2N5486	NFET	RFA		ECG312	2SK104	

(Sampling of devices found in Yaesu and Icom rigs)

2SA970	PNP	LNA		ECG290A	
2SA1015	PNP	GPA	2PA1015	ECG290A	
2SA1161	PNP	RFA			
2SC1815	NPN	GPA	2PC1815	ECG85	
2SC2240	NPN	LNA		ECG90	
2SC2348	NPN	RFA			
2SJ105	PFET	GPA	J177		
2SJ107	PFET	ASW	PN4392		
2SJ108	PFET	LNA			
2SK117	NFET	LNA		ECG458	
2SK118	NFET	GPA		ECG458	
2SK330	NFET	RFA			

*MPF102	NFET	RFA	BF245A	ECG451	2SK40
MPF970	PFET	ASW	J174		
MPF971	PFET	ASW	J176		
*MPF3822	NFET	GPA	2N3822	ECG459	2SK30
MPS918	NPN	RFA		ECG108	
MPS2222	NPN	GPA	PN2222	ECG123AP	2SC877
MPS2907	PNP	GPA	PN2907	ECG159	

MPS5771	PNP	HSS			
MPS6568	NPN	RFA		ECG123AP	
MPS6652	PNP	GPA			
MPSA06	NPN	GPA		ECG287	2SC983
MPSA14	NPN	DAR		ECG46	
MPSA92	PNP	GPA		ECG288	
MPSH10	NPN	RFA		ECG229	2SC1123
MPSH69	PNP	RFA			
MPSL01	NPN	GPA	2N5550	ECG194	
MPSL51	PNP	GPA	2N5550	ECG288	
*MRF475	NPN	RFPA		ECG235	2SC1969, 2SC2098
*MRF476	NPN	RFPA		ECG236	2SC1678, 2SC2075
MRF477	NPN	RFPA			
*MRF607	NPN	RFPA	BFQ42	ECG472	2SC320, 2SC628

GPA - Gen. purpose ampl.	LNA - Low noise ampl
RFA - RF ampl (FT>200 MHz)	RFPA- RF Power Amplifier
MSS - Med. Speed Switch	LFPA- Low Freq. Power Ampl.
HSS - High Speed Switch	ASW - Analog Switch
DAR - Darlington Pair	

NOTES:

1. Phillips (formerly Signetics) has recently expanded its line of integrated circuits and discrete semiconductors; devices are prefixed with "PN" to signify Phillips. (i.e. PN2222 = 2N2222)
2. NTE Semiconductors now replaces the "ECG" line and thus part numbers are fully interchangeable (i.e. NTE378 = ECG378).
3. Transistors listed are a) common devices for experimentation, b) used in popular QRP rigs and 3) used in Japanese HF rigs. Many are available from DigiKey, Mouser, Hosfelt, etc. NTE/2SC types can also be ordered through Radio Shack dealers.
4. Cross references are usually based on Ic, Pd, Hfe and FT parameters. Specs such as Cin, Cout, Zin, gm, etc. are not usually well matched and thus should be used with caution in RF sensitive circuits where these parameters are important.
5. Information on cross references or substitutions based on personal experience are welcomed.

Updated: 3-96

de Paul NA5N (pharden@nrao.edu)

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
 From: Charles Cashion <sun1055!ccashion@uunet.uu.net>
 Subject: [1277] East Moriches

Message-ID: <9607191453.AA11326@sun1055.spd.dsccc.com>

REFERENCE: N2QCE@aol.com

John, N2QCE, requested lat/lon for East Moriches

The URL that was posted a few days ago was

<http://www.mapquest.com>

One of my co-workers has found two more....

<http://cello.cs.uiuc.edu/cgi-bin/slamm/ip211/>

and

<http://www.census.gov/cgi-bin/gazetteer>

>From this last URL, East Moriches, NY has coordinates of

40.81009 N 072.76053 W

Regards,
Charles

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: Ron Giuntini <rong@slip.net>

Subject: [1251] Ergonomics

Message-ID: <E0uh6MQ-0003gI-00@mouse.slip.net>

I really like the ideas in the recent post about the old CIA radio. Anyone know where to find a rounded enclosure for the 40 9er? I guess the altoids case is rounded but wonder what else might do?

Ron KB6GK

NorCal #1718

San Francisco

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: ljones@why.net (ljones)

Subject: [1258] Feb FD

Message-ID: <19960719072807679.AAC131@16.ann1.dal.why.net>

Greetings Gang...

Hey gang, I would be interested in a winter field day. I have often thought that a winter field day is something to try. After all, not all

emergencies happen in the summer months. Let's give it a try this coming Feb. Any takers back east???

72/73

dee-it dee-it

Larry Jones N50SG <><	NORTEX	QRP-ARCI	G-QRP	MI-QRP	CQC
4028 Random Circle	NorCal	NE-QRP	QRP-L	ARRL	NTMS
Garland Tx 75043-3250	EM12QU	96.62 W LONG	32.87 N LAT		

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Mike Boice <kd0fx@worldnet.att.net>
Subject: [1302] Gluing toroids
Message-ID: <1.5.4.32.19960719220808.00669e44@postoffice.worldnet.att.net>

What does everyone use (other than commercial coil dope) to hold coil windings in place? I didn't find any commercial coil dope locally, and don't want to wait for the mail to order some. I've got some coils to wind for an ATU, power supply and NW30, and I'd like to glue the windings this weekend.

Or, maybe I should ask: how many people even bother to glue the windings in place at all?

73,
mike KD0FX
Richland WA QRP-L #576

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: jim hale <kj5tf@cei.net>
Subject: [1284] GU/DL5LYM
Message-ID: <31EFCE34.1765@cei.net>

Hope someone can help me. Last week I worked GU/DL5LYM and cant find his QSL info.
I was running my QRP+ mobile and a Fiberwhip whip on 30M. He was calling CQ on 10.102mHz with few takers!

BTW, I finally developed my pics from QRP to the field from last April.

I was on an uninhabited island on Beaver lake Arkansas. I even tried 20M SSB on 14.260 US Island /IOTA freq! I did a little better on CW naturally! hi The pics made me remimber the great time I had. I tried to digitalize them but costs were \$10. a scan! :-(

Here in Arkansas we now have two QRP forums. One on monday eve 7:30 local time on 3.560mHz also on packet @bbsar !

72/3'z de Jim KJ5TF/QRP

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Reginald Mackey Sr." <reggie@lightspeed.net>
Subject: [1297] hw-7 sold
Message-ID: <31EFF8A3.3C0D@lightspeed.net>

the hw-7 i listed for sale is gone!
thanks

--

Reggie
reggie@bak2.lightspeed.net e-mail
k6xr@kc6kge.#cenca.ca.usa.noam amateur radio
805-833-3027 home

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: GARY McCAUGHEY <MAIL4GARY@worldnet.att.net>
Subject: [1254] INPUT ON THE S&S ARK-4 (NOT THE ARK-40)
Message-ID: <199607190324.DAA03312@mailhost.worldnet.att.net>

ANYONE OUT THERE BUILD AND/OR USE THE S&S ENGINEERING ARK-4. THINKING ABOUT BUILDING ONE AND WANT YOUR INPUT ABOUT BUILDING AND PERFORMANCE. THANKS.

DE GARY - WA2UAX

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: N2QCE@aol.com
Subject: [1272] Lat/Long map address or location info requested...
Message-ID: <960719100720_364778901@emout13.mail.aol.com>

Hi All,

I must have copied the address wrong for the maps that give lat and long that was posted to the list a week or so ago. Anyone remember it? If not I could use Lat/Long for East Moriches, NY 11940. TNX es 72. de John N2QCE

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: KA3YJG <qrp@earthlink.net>
Subject: [1304] Logging programs/Windows 95
Message-ID: <31EFFCC3.1169@earthlink.net>

Has anyone found a flexible logging program that takes advantage of the Windows 95 environment?

To keep the posting on the list down, please E-mail me. If there's significant input, I'll distill it and post. Thanks in advance.

de KA3YJG

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dave Fifield <fifield@lan.nsc.com>
Subject: [1290] Long Posts - Facts
Message-ID: <31EFDD6C.5B66@lan.nsc.com>

I spent a few minutes calculating the overhead (i.e. wasted space) in yesterday's digest. I removed quotes from previous postings, excess white space (some of which does count as "bytes") and TMPS/extraneous signature information (I left each posting with up to two lines at the end: one to say tnx/cul and the other for the name/call/whatever). The meaning of all the postings remained unchanged. Here are the results:

	Raw Digest	Modified Digest	Waste (%)
Words	9,650	8,551	11.4
Characters	50,846	45,523	10.5
Paragraphs	1,389	1,207	13.1
Lines	1,856	1,619	12.8

Conclusion: We could reduce our bandwidth by 10% at least and still have 5NN each way.

Tnx for your cooperation :-) Dave Fifield, KQ6FR

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: lve1@inel.gov (Larry V East)
Subject: [1288] Map Server Access Problem
Message-ID: <2.2.16.19960719172247.25a746f6@eloi>

Well, I have tried several times this week to connect to the "mapquest" web site and always get the following error window:

Netscape is unable to
locate the server:
www.mapquest.com
The server does not have a DNS entry

So NOW what?? (Ain't computers wonderful... and yes, I included the obligatory "http://" before the "www.mapquest.com".)

72, Larry W1HUE/7

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Hank Kohl <k8dd@tir.com>
Subject: [1271] MW/AC8W/QRP in Wales
Message-ID: <199607191358.JAA25195@tir.com>

Stan, AC8W, is "across the pond" vacationing in M and MW land. That's the same as what used to be (and still is) G and GW land, or England and Wales.

He plans to find a park Saturday, July 20 around 1100Z and setup his IC-735 and a long wire on 14060. Look for MW/AC8W.

That's Saturday, July 20 at 1100 UTC. Subtract the proper number of hours for your area to get the local time! (Hint: Should be about 7 AM EDT)

73 Hank

*/ Hank Kohl K8DD k8dd@tir.com
*/ MI-QRP - Vice Pres. QRP-ARCI - Director
*/ G-QRP ARRL/LM QCWA/LM QCAO/LM

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Richard Wilkerson <richqrp@worldnet.att.net>
Subject: [1255] NN1G
Message-ID: <31EE9A77.6EDC@worldnet.att.net>

Does anyone know if Dave Benson NN1G of small wonder labs is still open for business and does he have an Email address??thanks rich wd6fdd

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: cjsterl@ix.netcom.com (Craig J. Sterling)
Subject: [1296] NORCAL 40A conversion to 30 Meters
Message-ID: <199607191943.MAA04905@dfw-ix1.ix.netcom.com>

Gang,

Has anyone in the group converted their NORCAL 40A to 30 Meters as per Ed Burke s article that appeared in QRPp December 95?

Love to hear from someone before I perform surgery!

Thanks,
Craig, AA3MD

Craig Sterling (AA3MD) cjsterl@ix.netcom.com
AA3MD TMPS 1996 Qs=182 States=40 Confirmed=15 DX=35
MA ME NH RI VT NJ NY MD PA AL FL GA KY NC SC TN VA AR LA MS NM OK TX CA
AZ OR MT WY MI OH IL IN WI CO IA KS MN MO ND NE
EW VE1-3 LZ G XE 9A HA VP9 DJ OZ EA1 EA8 OK I GM C6 HB SP YT ZL CY0 OM
3B8 PJ2 CM F HC HB0 OA UT TI GU SM OH KP4

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: ROYGREGSON@aol.com
Subject: [1253] NW8020
Message-ID: <960719020254_159559044@emout09.mail.aol.com>

Rick and the group.....Rick, there are more differences than the VBT.
Added IF gain,
Changed pick-off point for the AF filter so your ear drums aren't assaulted when transmitting. Circuit traces changed for better stability and a quieter receiver. The receiver has been described as even "HOTer" now. The radio is \$75.00. The filter PCB is also different, the traces are on the circuit side instead of the component side, and has screening and solder mask ! Also, new kits come with a dial pointer kit, and a calibrated dial decal for the band in use. Improved instructions too ! What do the French say "viva la difference" or something like that ! CUL Roy

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: JEVERHART@cayman.vf.mmc.com
Subject: [1274] QRPP Good News!
Message-ID: <960719102828.20623a4a@carib.vf.mmc.com>

Gang,

My QRPP arrived yesterday in Southern New Jersey. Since I often seem to be about the last to get it, (I think my postman is a ham...) most of the rest of you probably should have yours by now.

Kudos to Doug, KI6DS for another superb issue!

72/73,

Joe E., N2CX

kwork: jeverhart@cayman.vf.mmc.com
home: n2cx@voicenet.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: RHILTO@acxiom.com
Subject: [1279] Re[2]: Better Packaging For 'Wilderness' Type Radios
Message-ID: <1efa6ec0@acxiom.com>

Isn't it amazing that some people feel compelled to quote a 72 line article just so they can attach an 11 word comment. Don't people read the messages, some just this week, about subscribers who have to _pay_ for reading the list?

Bob ki5ez

>Hey, this is REAL close to what I was talking about!
>Mike WA6ARA
>----- RIG.TXT follows -----
>>I've been following with interest the discussions about changing
 < big snip >
>>the radio would survive the trip.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: herr@ridgecrest.ca.us (Michael Herr)
Subject: [1289] Re[2]: Better Packaging For 'Wilderness' Type Radios
Message-ID: <v01530500ae16679cad56@[199.120.150.48]>

Gee whiz, I think I've just been flamed!

>Isn't it amazing that some people feel compelled to quote a 72 line
>article just so they can attach an 11 word comment. Don't people read
>the messages, some just this week, about subscribers who have to _pay_
>for reading the list?

>

>Bob ki5ez

>

>

>

>>Hey, this is REAL close to what I was talking about!

>>Mike WA6ARA

>>----- RIG.TXT follows -----

>>>I've been following with interest the discussions about changing

> < big snip >

>>>the radio would survive the trip.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Lau, Zack, KH6CP" <z1au@arrl.org>
Subject: [1292] Rig Packaging
Message-ID: <m0uhKJ6-000f7sC@mgate.arrl.org>

How about packing a radio station inside a plastic pencil case? I've built 10 GHz transverters inside them--I think I even showed one off at the QRP table at Boxboro, MA.
(Division convention?)

You might have some sort of switch (magnetic?) to turn off the power when you close the lid. Inside, you could put your QRP rig, antenna, battery, keyer, and paddle. This gives you the flexibility to change rigs for the application--that 15M rig might not be too useful if

you are only able to operate late at night. Yeah, I know, I've worked KH6 to W4 after midnight on 15M running QRP to a bobtail curtain.

Best of all--the usually go on sale in another couple of weeks :-).

Zack KH6CP/1

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Lau, Zack, KH6CP" <zlau@arrl.org>
Subject: [1268] Rounded Enclosures
Message-ID: <m0uhFkf-000f5hC@mgate.arrl.org>

How about using die cast aluminum boxes?--I've never seen one with sharp corners. Ed Hare used one--see p. 48 of the June 1996 QST kit review.

Zack Lau KH6CP/1 zlau@arrl.org **8 states on 10 GHz**

BTW, QRPers aren't the only ones having fun.

[http://uhavax.hartford.edu/disk\\$userdata/faculty/newsvhf/www/news796.html](http://uhavax.hartford.edu/disk$userdata/faculty/newsvhf/www/news796.html)

has info on the NEWS 10 GHz Show and Tell Swap meeting in Vernon, CT to be held July 20 at 1 PM.

We normally have around 60 people sign the roster--and tomorrow's suppose to be a nice day...

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: John Mckee <jmckee@rfmd.com>
Subject: [1263] small red keys
Message-ID: <199607191246.IAA75511@nss2.CC.Lehigh.EDU>

Gang,

Has anyone used one of the "little red keys"? I got some info and a photograph. What material is the base made from? How about the feel? Any preferences for the large or small knob version?

Tnx es 72

John WB40FT
jmckee@rfmd.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: bfollett@ditell.com
Subject: [1252] St Louis Tuner Schematic
Message-ID: <199607190253.UAA31952@orion.ditell.com>

Gang:

Cameron wrote:

<<Just a small correction to the schematic on page 10,
of the manual.

According to assembly procedures, switches S3A and
S3B would be on the outer lines of C5, C6 and C7, C8,
respectively, not on the inner lines, which is actually the
capacitor frames.

Please confirm this.>>

Good catch Cameron. The wiring instructions are correct, but somehow
the schematic got the vari-caps turned around. Look at the QRPp, March
96, article on the St Louis Tuner, original St Louis Club version, for
the correct schematic.

73, Bob

Bob Follett WA7FCU, QRP-L # 129, NorCal, ARCI, 10-10, ARS
2861 Estates Dr. VOICE: 801.649.6457
Park City, UT 84060 E-mail: bfollett.ditell.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dave Matthews <dmatt@roch875.mc.xerox.com>
Subject: [1308] Stringing up a dipole
Message-ID: <9607200100.AA03109@chip>

The Explorer is up and running and now I need an antenna. Actually I also
need to get to dad's to set the L0 to a reasonable value. It is currently

set so that I found some slow code..... The antenna is 15' of 24 guage
tossed up on the porch roof.

What is good for stringing up a dipole? I am considering finding some
kevlar kite string - 100+ pound test if I remember right. Does this stuff
work? Is it UV stable enough? I don't want to use anything that is very
visible.

Dave
KB2YWT

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Richard Wilkerson <richqrp@worldnet.att.net>
Subject: [1307] thanks
Message-ID: <31EFB828.1E1F@worldnet.att.net>

Thanks to all who gave Dave's, NN1G address. 72's rich wd6fdd

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: wb2vuo@juno.com (William K Hibbert)
Subject: [1310] Usable Receiver Sensitivity
Message-ID: <19960719.215257.11207.1.wb2vuo@juno.com>

After a couple of conversations on just "how good is this RX...", I would
like to pass on, from the ARRL "The Radio Amateur's VHF Manual" by Ed
Tilton, W1HDQ, the guideline(s) I have used in the last 30 years on the
air.

First off, I got my Novice and Technician together in 1966 (per the rules
in effect then). I ran on the 80 & 40 Meter band as a Novice, and, after
hitting to 10WPM "wall" (3 times!) went on 6 meter AM. The "VHF Manual"
was my "Bible" for amateur radio for the first 5 - 6 years.

Ed's observation on receivers (paraphrased) was that HF gear was/is
noise-limited, in other words, the noise from atmospheric/cosmic sources
was far stronger than the internal noise (Noise Figure). The VHF
receivers tended to have more internally-generated noise, so the lower
the NF the better.

The methodology used to check this out was to connect a shielded 50-ohm
load to the RX. With the AGC off, leaving the gain set at a fixed
level, remove the load, and connect the antenna. If the noise (with a
quiet band) increases, you have a low enough Noise Figure, and your RX

is noise-limited. If you hear no increase in noise, then you want to look into improving the RX, with a preamp, better front-end, reduced losses in the front-end, or better matching to the antenna.

I still use this for my empirical receiver checks. Recently, I tried out a friends Ten Tec 6 Meter XVTR, and it passed the Noise-limited test. We switched the GaAsFet preamp in the circuit, and the levels came up, signal and noise both at the same rate. No real improvement, just a LOUDER signal. The test source was the KW2T/B 500mw Solar-powered beacon, located in FN13ja. At best, the beacon is a 529 here, and is a perfect test for a receiver...

Fancy lab test gear IS nice, but it's hard to beat the ear...

72/73, Keith, WB2VUO, QRP-L # 582

wb2vuo@juno.com

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Monte Stark <ku7y@sage.dri.edu>
Subject: [1257] Vibroplex Phone # needed
Message-ID: <Pine.SUN.3.90.960718235412.3669A-100000@vortex.sage.dri.edu>

Hi All,

What is the phone number for Vibroplex? I need to order some parts.

Thanks,

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Frank" <g3ycc@enterprise.net>
Subject: [1286] W3EDP antenna
Message-ID: <199607191814.SAA03734@mail.enterprise.net>

As there has been some mail on this old antenna, described some 60 years ago (!), I have added details to my web page. I hope this is of use.

72/3

--

Frank G3YCC
Ham Radio QRP Web Page:
<http://homepages.enterprise.net/g3ycc/>

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Joe Gervais <vole@primenet.com>
Subject: [1301] Re: ..._.
Message-ID: <199607192156.0AA29300@primenet.com>

Me again,

Larry (N50SG) wrote:

> While we're at it, I have a question. Why do a large majority of CW
> operators insist on sending a dash (-...-) in between sentences. They
[SNIP]
> Why can't you just pause. Does every iota of space have to be filled
> with something.

Having lost a few QSO's to the band suddenly shutting down,
I kind of like having some evidence that the other ham is
still there in between thoughts. That and tracking the state
of QSB at any given moment.

Then again, I think Babylon-5 and The X-Files are the only
reason to turn on the television, so my judgement may well
be skewed. :-)

Cheers de KC7NEV,

-Joe, vole@primenet.com, AZ ScQRPion #7

KC7NEV TMPS 1996 Qs=013 States=8 Confirmed=2 DX=000
AK, CA, CO, LA, MN, OR, WA, VA

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Ed Manuel" <n5em-qrp@msn.com>
Subject: [1281] RE: ARS Contests - Ant Cat
Message-ID: <UPMAIL06.199607191555170795@msn.com>

Russ,

I agree. I think that antennas should be added into the Spartan Sprint calculations, at least for the portable category. There are a number of products that are very lightweight. The Wireman has some stranded, copper clad steel, superflex, black jacketed (say that fast) that is 26 awg and is very light for the strength it provides. I'm not enthusiastic about thin magnet wire. The stuff I have used smaller than about 24 awg seems to be very fragile and subject to kinking. Might be fine for a one-night stand if you were careful to unroll it, but I'd like to get longer service from a backpacking antenna - at least 3 or 4 nights operation. Imagine repairing your #28 magnet wire dipole when it breaks in the field.

As to feedlines, here is a real challenge. I'm not sure you couldn't fabricate a simple, tiny long wire tuner that weighs less than any feedline you might use, particularly if you had a really small/lightweight SWR indicator (leds in the rig?).

Good thread, Russ. I look forward to some innovative ideas from the brain trust out there.

Ed, N5EM
n5em-qrp@msn.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Monte Stark <ku7y@sage.dri.edu>
Subject: [1291] RE: ARS Contests - Ant Cat
Message-ID: <Pine.SUN.3.90.960719105314.4529G-1000000@vortex.sage.dri.edu>

Ed et all,

Hmmmmmm, mount the rig at the antenna and no feed line needed.

Bring the audio down, use blocking caps and use same line for the tuning. Reverse the polarity to run a keying transistor.

Or turn the volume up, run the tuning knob with a loop of thread and another thread to trip the memory keyer.....

Geeeeesssh, rules, who needs em'

(Don't forget, there needs to be points taken away for each oz of clothes used when it's below 50F)!

cul,

73, Ron,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Washoe Lake, Nevada.....
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: herr@ridgecrest.ca.us (Michael Herr)
Subject: [1276] Re: Better Packaging For 'Wilderness' Type Radios
Message-ID: <v01530500ae163c81973a@[199.120.150.67]>

Hey, this is REAL close to what I was talking about!

Mike WA6ARA

>----- RIG.TXT follows -----

>I've been following with interest the discussions about changing
>the ergonomics of our 'wilderness' type radios. It was accurately
>noted, that though many of us are primarily interested in outdoor
>activities, and bring radios along with us to the wilderness, our
>radios are designed to be operated at home, on a shelf at eye level.

>

>I have a radio which was built in the 60's for use by Special Forces
>and CIA types who are on the move. Though the technology is 30 years
>old, I often camp with my PRC-64 simply because it was designed for
>operations in the bush. Here are some of the features that it has
>which we might want to incorporate into our 'wilderness' gear.

>

>1. The rig in it's carrying pouch is entirely self contained. The pouch
> contains the radio, antenna kit and monofilament line (50 lb.) to
> get the antenna into the trees.

>

>2. ALL operating controls, connectors etc. are located on the top panel.

>

>3. The top panel has a gasketed lid which completely encloses the top panel,
> protecting the delicate controls. The lid latches closed and is dust
> and water tight.

>

>4. There is a battery cut-out switch so that when you close the lid, the
> radio is off NO MATTER WHAT. No dead batteries because you forgot
> to turn it off.

>

>5. There is a built in key on the top panel.

>

>6. The batteries are inside of the radio, but easy to remove/change. Access
> is FROM THE TOP PANEL. Note: I keep my batteries inside of my parka/

> sleeping bag during winter camping trips. Under V E R Y cold
> conditions I keep the entire radio inside of my sleeping bag all
> night. Cold weather can cripple some types of batteries.
>
>7. The radio case is smooth, all corners are rounded so as to not cut,
> tear & chafe the camping gear it is packed with; or me!
>
>8. The rig has a simple, internal antenna tuner with indicator.
> (I often make my skeds using just a slant wire in a tree against
> a quarter wave counterpoise - Army style. In a pinch the tuner
> will allow you to make your contacts using a barbed wire fence if
> this is all that you have.)
>
>9. In addition to a standard antenna connector such as a BNC, install
> binding posts in parallel with the antenna connector for connecting
> directly to wire antennas.
>
>10. My earphones are stored inside of a small enclosure in the radio.
>
>11. I wired the battery harness to allow me to keep the receiver
> running while I use the solar panel to top off the batteries.
> Since I used four 6 volt gel cells to power the radio, I can
> use my charging harness to charge the batteries from any source
> that is above about 7.5 volts. This can be either my solar panel
> or the jeep battery.
>
> One item which I would add would be an internal speaker. My spy
> radio does not have a speaker, for obvious reasons. I always use
> headphones. Never disturb others with your radio "noise", BUT if
> the phones are lost or damaged, an internal speaker - even a poor
> one would allow you to make your contacts. It can be a good way
> to share your radio contacts with your camping friends if they are
> interested, especially on those loooooong winter nights, when my
> camp mates are staring at the walls, and I'm listening to the BBC!
>
>
>Our modern electronic components and designs are GREAT! So now let's
>incorporate them into a physical package which suits the needs of
>outdoor adventurers. If I had to leave tonight on short notice, this
>is the radio I'd grab. I know that everything is in the bag, and that
>the radio would survive the trip.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: <cbailey@PAMDT.ANG.AF.MIL> (CAMERON C.R. BAILEY, MSG, ISE 2-8737)
Subject: [1283] re: Better Packaging For 'Wilderness' Type Radios.
Message-ID: <heH8+b7vv1B@PAMDT.ANG.AF.MIL>

Hint:

Check your local "military surplus" store for older first aid kits. These are aluminum. New ones are plastic. I've seen some that are about 9 in x 5 in x 3 in. They are waterproof and have a lid that has four latches. I've been eyeing the commercial first aid kits as well. These kits were made for "field" use and are watertight.

Don't overlook the canvas pouches made to go on web belts. These make nice battery carrying cases.

kt3a

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: JEVERHART@cayman.vf.mmc.com
Subject: [1264] RE: Ergonomics
Message-ID: <960719084727.20623a4a@carib.vf.mmc.com>

Ron, you wrote:

>I really like the ideas in the recent post about the old CIA radio. Anyone
>know where to find a rounded enclosure for the 40 9er? I guess the altoids
>case is rounded but wonder what else might do?

I have a few suggestions. If you get hold of a commercial electronics catalog - Newark Electronics, Allied, or even the ham favorites Mouser and Digikey, check out their cabinets and enclosures. Several manufacturers make molded plastic or aluminum rectangular enclosures that foot the bill. Manufacturers include Hammond, Davies and Bud. In fact many locals refer to them generically as Bud boxes. Probably the top of the line is Pomona - andy you pay extra for them! The boxes come in a variety of sizes and the best have lids that retain the same overall shape and are held on with self-tapping screws.

I've used these boxes for a number of rigs and accessories. They hold up well with rough handling (at least the metal ones). At the NEQRP meeting at ARRL HQ this year, Jim Fitton, W1FMR had two neat bud box projects he had built. The boxes were about 1x2x4 inches. One had a complete tuner and swr indicator and the other a keyer with a built-in paddle! I managed a swap with Jim for

two of the (empty) boxes myself.

If you want to pay \$\$\$ buy them from an industrial electronics outfit. If you are like me, scrounge around junk boxes at hamfests - folks build little projects in 'em that don't work out and sell them in the "anything in this pile for a dollar" area. There is also a smaller selection of plastic cabinets at Radio Shack. They range from xX2x1-3/16 (270-220) to 7-1/2x4-1/4x2-1/4 (270-224).

Good luck and 72/73,

Joe E., N2CX

work: jeverhart@cayman.vf.mmc.com
home: n2cx@voicenet.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
Subject: [1270] RE: Ergonomics
Message-ID: <35899.owen@apollo.eeel.nist.gov>

>

>> I really like the ideas in the recent post about the old CIA radio.
>> Anyone know where to find a rounded enclosure for the 40 9er? I guess
>> the altoids case is rounded but wonder what else might do?
>>

Don't forget about using 50 caliber Ammo Boxs. Can be found at most surplus stores at less than \$6.00. Several sizes other than 50 Caliber but the 50 is 11-5/8 long 5-1/2 wide 7-1/8 deep (holds most qrp rigs, gel-cell and other parts) is water proof, has a handle on top, and opens from the top. Use several, put rig and batterys in one, antenna tuner in another. If you buy extra's they make great tool boxs. One source is C&H Sales Co.
2176 E. Colorado Blvd. Pasadena, CA. 91107 1(800)325-9465

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: George Gingell <k3tks@u1.abs.net>
Subject: [1261] Re: Excess Ham Magazines
Message-ID: <Pine.BSI.3.93.960719075216.6953A-100000@u1.abs.net>

Sounds good Dave,
I will cc this to qrp-1, since I didn't catch John's email address.
I will look thru the digest today and make a copy of it.

OBTW, Please keep me posted on the plans, I will have some materials to add to the collection for sure. I am beginning a Major Re-Modeling Project in my Basement, Office, Library and Family room. I just purchased three bookcase units and two small file cabinets. I also have an eight foot work table for the Library. When complete, The Maryland Milliwatt QRP Reference Library and The Gingell Family Library will be Merged into one unit. I am hoping to add a decent computer as well. I am gathering components for a 486sx-33 system with CD Rom and Sound card. Not exactly a super system, but a 4 Generation Upgrade for me. It will be a few weeks before I can determine what will be excess material. I will keep you posted with the progress.

QRP DX TU (C) 1986 G.Danny Gingell, K3TKS@abs.net

On Thu, 18 Jul 1996, David Johnson wrote:

> On Thu, 18 Jul 1996, George Gingell wrote:
>
> > John, N5INZ asked if anyone would be interested in a large collection
> > of ham magazines. Some one near him is donating them to him and he would
> > rather pass them on to someone who can use them rather than feed them to
> > the dumpster :-(
>
> Hey Danny, please let him know that we would like to use those
> magazines as contributions to the Ukrainians! Thanks!
>
> He can contact me or Paul, AA4XX
> (AA4XX@amsat.org)
>
> 72,
>
> Dave
>
> David W. Johnson, Ph.D. QRP ARCI 6546
> Amateur Radio Extra WA4NID G-QRP 4864
> email: djohnson@acpub.duke.edu NorCal 355
> packet: WA4NID@KB4WGA.#DUR.NC.USA.NOAM TSRAC 3482
>

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Mike Cloud <cloudm@mhsgate.meth-mem.org>
Subject: [1265] RE: Feb FD
Message-ID: <A640EF3101172C16@mhsgate.meth-mem.org>

>
> From: ljones@why.net (ljones)
>
>Greetings Gang...
>
> Hey gang, I would be interested in a winter field day. I have often
>thought that a winter field day is something to try. After all, not all
>emergencies happen in the summer months. Let's give it a try this
>coming
>Feb. Any takers back east???

>	>72/73 dee-it	dee-it	---					
>	>Larry Jones	N50SG	<><	NORTEX	QRP-ARCI	G-QRP	MI-QRP	CQC
>	>4028	Random Circle		NorCal	NE-QRP	QRP-L	ARRL	NTMS
>	>Garland Tx	75043-3250		EM12QU	96.62 W LONG	32.87 N LAT		

>
Yah some real interest hr in the Memphis, TN area. Post-super bowl es all could
be pretty slick. Pse keep me informed.
de Mike, KR4IT

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Joe Gervais <vole@primenet.com>
Subject: [1300] Re: Feb FD
Message-ID: <199607192147.0AA27503@primenet.com>

Howdy All,

Larry (N50SG) wrote:

> Hey gang, I would be interested in a winter field day. I have often
> thought that a winter field day is something to try. After all, not all
> emergencies happen in the summer months.

Actually the AZ ScQRPions have been discussing setting up
a club-sponsored winter field day. We're still hammering
out the details, but we hope to have a few prizes (not just
for best score - perhaps "Worst WX Endured"...), free
certificates for all who submit logs, etc. February happens
to be the time period we were looking at. Formal announcement
should be following in a few weeks.

Besides this is the only way we can operate in sub-100F wx.
And the rattlesnakes should still be hibernating. :-)

If you folks could keep the suggestions coming, we'd like

to make this as fun/interesting as possible. And of course find out what it would be like if we had an emergency when Mother Nature wasn't in the best of moods (which seems when it would be more likely in the first place).

Sheesh, if the rest of the world thinks we QRPers are nuts now, wait 'til word gets out about this... :-)

Actually I wonder how many QRO ops would dare try a winter FD - generators getting flooded, stuck in the snow, engines freezing in the cold, fuel and pizza deliveries not getting through.... This may well turn out to be a perfect QRP application.

Thoughts?

Cheers de KC7NEV,

-Joe, vole@primenet.com, AZ ScQRPion #7

KC7NEV TMPS 1996 Qs=013 States=8 Confirmed=2 DX=000
AK, CA, CO, LA, MN, OR, WA, VA

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: wb2vuo@juno.com (William K Hibbert)
Subject: [1278] RE: Feb. FD
Message-ID: <19960719.110912.11207.0.wb2vuo@juno.com>

Greetings from the Depths of the Great Bergen Swamp...[FN13ac]

I sent a reply directly to Larry, N50SG on this, but thought it was worth a 2nd posting. too...

I am all for a Winter FD operation, and would like to see it operated with a QRP mindset...

I spoke with a ham just south of the Great Bergen Swamp, and he has a dairy barn, heated only by his "girls" (75 head of dairy cattle). The air quality may suffer at times, off-the-air conversation may be limited (MOO-O-O-O), but the "girls" won't even mind if you run with speakers instead of 'phones :-)

Another possibility is the Great Bergen Swamp itself. It is the home of a native Pygmy Rattler, the only spot in WNY where they are regularly found, and is the largest concentration of Vipers and Serpents outside of Albany & the Statehouse... (Why did Gov. George let his Ham ticket

expire???)

Also, my wife is active in Scouting, and there are winter Campouts in January and February. Environmental concerns are high on the teaching agenda(s) in Girl Scouts, and QRP is a "Green" version of the hobby, if I ever saw one...

How about this for a scoring system for a Winter FD ??

POWER	POINTS, Phone	POINTS, CW
0.01 - 0.5 watts	25 points/QSO	50 points/QSO
0.5 - 1 watts	10 points/QSO	20 points/QSO
1 - 5 watts	5 points/ QSO	10 points/QSO
5 - 150 watts	1 point/QSO	2 points/QSO
150 - 1500 watts	-- CHECK LOG, Been Nice Knowing Ya! --	

All stations should use Battery power, or Natural Sources, such as the wood-fired steam generator that someone mentioned for the Spy radios a couple of days back. (If you run one of these, don't tell NY State about it unless you are a licensed Stationary engineer. They get upset when they don't get MORE than their fair cut...)

Possible conflicts include:

NFL Playoffs

Super Bowl

Pro Bowl

VHF Sweepstakes

Innumerable various State QSO Parties

A DX contest or 3

President's Day Sales

Comet Hale-Bopp

All of the Above

None of the Above

There is enough lead time to continue this discussion, especially at the Local Club Level. Talk it up, post some suggestions, get your gear (radio & Cold-WX survival) together, kidnap a QRO op or 3 and hold them until they sell their 8877's...

Let's have a blast! 72/73, Keith, WB2VUO, QRP-L # 582

wb2vuo@juno.com

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: Jerry <jfelts@rapidcity.com>
Subject: [1299] RE:FS QRP GEAR
Message-ID: <199607192137.PAA09415@host1.rapidcity.com>

The NC-40A and Backpacker II have been sold. Thanks for all the replies I got!

Jerry

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: rbm@juno.com (Ronald B. Melton)
Subject: [1312] Re: Gluing toroids
Message-ID: <19960719.203851.12567.2.rbm@juno.com>

I use clear fingernail polish.

Ron Melton - N7NIQ
Richland, WA

On Fri, 19 Jul 1996 15:08:08 -0700 Mike Boice <kd0fx@worldnet.att.net>
writes:

>What does everyone use (other than commercial coil dope) to hold coil
>windings in place? I didn't find any commercial coil dope locally,
>and
>don't want to wait for the mail to order some. I've got some coils to
>wind
>for an ATU, power supply and NW30, and I'd like to glue the windings
>this
>weekend.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "David D. Meacham" <ddm@datatamers.com>
Subject: [1250] Re: Intro to RF Design software
Message-ID: <Pine.LNX.3.91.960718194748.27919B-100000@dt1.datatamers.com>

Tom,
I haven't used "Cascade", but I have used "GPLA" and "G87" extensively
with no problems. I'd be interested to hear Wes' answer to your question.
72, Dave, W6EMD

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996

From: Kevin Muenzler <muenzlerk@uthscsa.edu>
Subject: [1275] RE: Lat/Long map address or location info requested...
Message-ID: <01BB7555.559022C0@muenzlerk.uthscsa.edu>

On Friday, July 19, 1996 9:07 AM, N2QCE@aol.com wrote:

>Hi All,

>

>I must have copied the address wrong for the maps that give lat and long that
>was posted to the list a week or so ago. Anyone remember it? If not I could
>use Lat/Long for East Moriches, NY 11940. TNX es 72. de John N2QCE

>

>

>

Well John,

The center of the zip code area 11940 is at lat=40.808, long=-72.753

Hope this helps.

Kevin, WB5RUE

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dan Keen <70731.722@CompuServe.COM>
Subject: [1256] Re: Looking for a replac
Message-ID: <960719063550_70731.722_EHM54-1@CompuServe.COM>

Ted Kell wrote:

> Well, thanks for the responses about straight keys. I have
> sent off for an AES
> catalog and will take a look at the Nye Viking line of keys. Other than
> the Kent, I wasn't aware of any currently being made.

Don't forget that AES also shows the Bencher and Vibroplex straight keys.
Kind of styled like their iambic keys.

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: lve1@inel.gov (Larry V East)
Subject: [1295] RE: Map Server
Message-ID: <2.2.16.19960719192846.2e2f6482@eloi>

In a previous posting, I stated:

>
>Well, I have tried several times this week to connect to the "mapquest" web
site and always get the following error window:
>

In response, Joel Malman send me the following information:

>
>Non-authoritative answer:
>Name: wwwA.mapquest.com
>Address: 208.5.128.106
>Aliases: www.mapquest.com
>

Well, guess what?!? I tried using wwwA.mapquest.com, and it WORKED! Guess
the "alias" is not in the local Domain Name Server...

Thanks for the several responses (only one of which was really helpful, but
that's OK... :-)

72, Larry.

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: launerb@crl.com (William H. Launer)
Subject: [1303] RE: Pricey Ham Gear vs Home Brew
Message-ID: <v01520d0bae15b7399fef@[192.0.2.1]>

Jukka OH6SC/OH8NGF wrote:

>Well, when a QRP'er gets a QSO to a rare country,
>through a massive pile-up, he should remember, that
>the other end surely needs a very good receiver,.....

Jukka points out the need for good receivers for weak signal
communication. One of the goals of QRP communication is to work
QRP to QRP, instead of just QRP to QRO. Because of this, that which
is necessary for the QRO dx station is just as important for the
QRP station. Small, lightweight equipment is necessary for the
backpackers, but since most of our operating is done from a fixed
location, weight/size aren't important factors.

Consider your ham station as a "system" composed of a number of
"subsystems" - antenna, transmitter, receiver, and power supply,
to name the major parts. It is important to optimize each part

as best we can within our own constraints.

Since most of us live in urban settings, few of us have the space to build extensive "antenna farms", so in nearly every case, our antennas are compromises. There are no "magic, do-all" antennas, that will be resonant and present a 1 : 1 VSWR across an entire hf band, so we have to consider our operating practices (and potential future activity), and design accordingly. You may be happy with 7.040(+/-) MHz for now, but what about tomorrow? Put up the best you can and use an ATU. In addition, a sharply resonant antenna can also improve receiver selectivity

A cw QRP transmitter is a rather simple device; it's an rf generator, with provisions for keying and transferring the output to the antenna. You can add "bells and whistles" such as keyers, etc., to suit your operating habits. The important thing is that it have a "clean" output. The station on the other end won't know how simple or complex your transmitter is!

The receiver is one of the most important "subsystems" in a QRP "system" because we (like the QRO operator) can't hear a marginal signal with a marginal receiver! The typical modern receiver has a "wide" front-end, which allows strong, adjacent signals to "swamp" the receiver agc, reducing its ability to hear weak signals. Likewise, atmospheric noise on the lower hf bands will have the same effect. Adding attenuators in front of the receiver are, for the most part, "crutches" which merely reduce the incoming signal strengths closer to the agc threshold, thus performing much the same function as an rf gain control performs on an rf amplifier. The "\$ multi-k" commercial rigs available from Yaesu, Icom, Yaesu, etc. are no exception to this - most are derived from their vhf/uhf designs, and do not meet the requirements of hf band weak signal communication. We need sensitivity, yes, but we also need front-end selectivity as well. As we all know, hf operation isn't neatly "channelized" as vhf and uhf are (for the most part).

The station power supply is almost always an afterthought. Batteries are a good power source (I ran my FT-301 for several years on an automobile battery/charger combo). They are the cleanest power source, but have several disadvantages. Lead-acid battery voltage sags as energy is depleted; while this makes for easy charge control, it is a disadvantage when you are trying for that "rare one" and your power output diminishes. For fixed station operation, a good regulated power supply can't be beat, but avoid switchers; their dynamic load response isn't as good as a good dissipative regulator supply. While the latter isn't as efficient as a switcher, it's still more efficient than a battery/charger combination when you consider charging overhead. Since most QRP operators are builders, power supplies are a natural for homebrew

projects. Building a good power supply is a "piece of cake", compared to some of the other projects you've built.

With the right equipment, the QRP operator can communicate with stations that the average QRO operator can't even hear. Just some food for thought.

72/73 - Bill wb0cld

Bill Launer
St. Charles, MO
launerb@crl.com
wb0cld@wb0cld.ampr.org [44.46.66.25]
qrp-l #279 qrp arci #3551

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: rheiss@tuba.aix.calpoly.edu
Subject: [1306] Re: Rounded Enclosures
Message-ID: <9607192258.AA32378@tuba.aix.calpoly.edu>

Yes, seeing the QST photo of the Green Mountain in the cast aluminum box was helpful. Our local electronics store doesn't carry the Ten-Tec line but does carry the rugged Hammond box that Ed used. They also had a cast plastic Caltronics box of the same shape and outside dimensions. Here is my take on the plastic version:

- + Inexpensive. Saved a couple of dollars.
- + Lighter than the cast aluminum, yet plenty rugged.
- + Easy to drill. My little 4.8 volt hand drill bogs down in aluminum.
- + Aesthetics. Mine has a zippy sky blue color, and I was able to find knobs with blue inserts to complete a modern look. Well, I like it.
- Thick sides. There are vertical ribs on four sides of the box. They don't help mount the board, and the ribs get in the way of smaller controls and connectors. To mount 1/8 inch headphone and paddle jacks, and a KC1 keyer, I carved away some ribs with a wood chisel.
- No shielding. To make a RF ground for the board and connectors, I laminated kitchen aluminum foil inside the whole box with Duco cement. This is tedious, but not as messy as painting a metal enclosure.

Ergonomics? Either the aluminum or the plastic molded box makes a very roomy enclosure for such a small board, the size of a QSL card. That's okay because I wanted a practical rig that's easy to modify and operate. Anyway, I chose to orient the box with the lid up. The big speaker is up there, and if I add a meter it would mount on the lid also. A long side of the box is the front and has all the controls. All connectors are on the right side. Unlike the other connectors, the antenna SO-239 sticks out from the surface, but with flange mount and four bolts it is unlikely to break off. The rig fits in a pocket of my day pack with the knobs up.

Another type of plastic box with rounded corners is made by Berol for 4 by 6 inch index cards, and sold at a local grocery store. It can hold a large battery pack for field day or whatever. Up to twelve D cells fit in the bottom, plus there is room above the battery pack to stow cables and a voltmeter with the lid closed.

73, Rob K06KA
rheiss@calpoly.edu

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Steve.Hideg.1@nd.edu (Steve Hideg)
Subject: [1267] Re: small red keys
Message-ID: <v02130508ae14f4c096dc@[129.74.35.16]>

At 9:44 AM 7/19/96, John Mckee wrote:

>Gang,
>
>Has anyone used one of the "little red keys"? I got some info
>and a photograph. What material is the base made from?
>How about the feel? Any preferences for the large or small knob
>version?

My only complaint with those keys is the coarse thread used on the adjustment screw. I need finer control than it affords, also the screw loosens when using the key. Anyone know of any kind of sticky stuff I could put in the threads?

--Steve

=====

Steve Hideg, Macintosh Consultant - OIT, Notre Dame

Telephone: (219) 631-3926

"A new poll indicates that if

E-mail: Steve.Hideg.1@nd.edu the presidential election were
URL: http://www.nd.edu/~shideg/ held today, most people wouldn't
http://qrp.cc.nd.edu/QRP-L/ vote because they think the
Ham Radio: N8HSC/9 election is held in November."
--Dennis Miller

=====

From owner-qrp-l@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: sholla@panasonic.atlanta.com (Holland, Steve)
Subject: [1269] RE: small red keys
Message-ID: <1996Jul19.100000.1619.36254@ntserver.panasonic.atlanta.com>

Steve:

Use loctite it is very good and you can get the type that does not
harden. It will keep the screw tight but allow adjustments when needed.
Threadlocker 222 is one that works well. There are probably other brands
that do as well but I am not familiar with them. 72 de N9HXX/4

Steve N9HXX/4
sholla@panasonic.atlanta.com
QRP-L # 555

From: Steve.Hideg.1[SMTP:Steve.Hideg.1@nd.edu]
Sent: July 19 1996 09:26
Subject: Re: small red keys

At 9:44 AM 7/19/96, John Mckee wrote:

>Gang,
>
>Has anyone used one of the "little red keys"? I got some info
>and a photograph. What material is the base made from?
>How about the feel? Any preferences for the large or small knob
>version?

My only complaint with those keys is the coarse thread used on the
adjustment screw. I need finer control than it affords, also the screw
loosens when using the key. Anyone know of any kind of sticky stuff I
could
put in the threads?

--Steve

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        Steve Hideg, Macintosh Consultant - OIT, Notre Dame

Telephone: (219) 631-3926           "A new poll indicates that if
    E-mail: Steve.Hideg.1@nd.edu     the presidential election were
    URL: http://www.nd.edu/~shideg/   held today, most people
wouldn't                             vote because they think the
    http://qrp.cc.nd.edu/QRP-L/       election is held in November."
Ham Radio: N8HSC/9                  --Dennis Miller
=====
==
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From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: "Ed Manuel" <n5em-qrp@msn.com>
Subject: [1282] RE: small red keys
Message-ID: <UPMAIL06.199607191555200349@msn.com>

John,

I bought one at Dayton. I got the large knob and I'd recommend the large one. The base appears to be cast epoxy. The workmanship is good, though not perfect. For the \$30 I paid for it, it's definitely a keeper. You won't break this thing in the field and it is reasonably comfortable to use. Definitely a CW key, not something like a microswitch that will do but never really feels right. Like the mouse used for a paddle, it will work but the feel leaves much to be desired. This thing feels pretty good. The height adjustment is too coarse. You have to really tweak to get it JUST right. A finer thread screw here would definitely be a benefit.

That's about it. I'd buy one again, knowing what I know. It's really portable. I've seen the little ATT keys that came from the central office frames and they are nice. If you have one of them, you would not need one of these, but every time I find one of those little keys, they are just too pricey.

Good keying.

72 from Houston
Ed, N5EM
n5em-qrp@msn.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Dan Hogan <dhhogan@lightside.com>
Subject: [1285] Re: Static discharges & Lightning protection
Message-ID: <m0uhIGF-0004KxC@covina.lightside.com>

Those "Puffballs" are called static eliminators. They reduce static build up on metallic surfaces, sort of. They are used on aircraft. As it was we experienced at least 2-3 hits a year on 747's, which normally cruise above the weather.

Dan Hogan (CSCE for General)
dhhogan@lightside.com

Dan Hogan
West Covina, CA
dhhogan@lightside.com

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: Charles Cashion <sun1055!ccashion@uunet.uu.net>
Subject: [1266] RE: Vibroplex Phone Number
Message-ID: <9607191307.AA10971@sun1055.spd.dsccc.com>

Monte Stark <ku7y@sage.dri.edu> wrote (ms>)
ms>
ms> Hi All,
ms>
ms> What is the phone number for Vibroplex? I need to order
ms> some parts.
ms>
ms> Thanks,
ms> 73, Ron,

Mitch published this himself last December...
fm>
fm> Felton "Mitch" Michell
fm> WA4OSR
fm> fmitch@maf.mobile.al.us

fm>
fm> The Vibroplex Co., Inc.
fm> 11 Midtown Park, E.
fm> Mobile, AL 36606-4141 USA
fm> 334-478-8873 Vibroplex
fm> 334-476-0465 FAX
fm>

You'all are quite welcome...
Charles Cashion W5ISZ

From owner-qrp-1@Lehigh.EDU Fri Jul 19 23:12:46 1996
From: George Gingell <k3tks@u1.abs.net>
Subject: [1262] Re: Z Match
Message-ID: <Pine.BSI.3.93.960719081424.6953C-100000@u1.abs.net>

Roy,
I hope you don't mind me cc this to qrp-1, this is super information.
I wish that I was smart enuff to write an article for The QRP Quarterly
on this subject.
I will cc this to Charlie also, I am sure that he would like to hear your
comments.
I am trying to get a major renovation/remodeling project done at my house
so I won't be able to try out any of these ideas for a while. I havn't
assembled my St. Louis ATU yet. (#122).
In regard to the Compact Z- Match Kit, I would say go for it! That is one
hot item at this time. Look at the response to the St. Louis ATU kit by
NorCal. You might want to talk with Doug, KI6DS about the project.
I personally would Recommend that you consider packaging it with a case
like either The Wilderness Radio NC-40A or Sierra. It is also important
to consider having an Optional SWR/Power Indicator as well. Here I would
recommend something like the "Stockton Wattmeter" as per G-QRP, Kanga
Kits, and the St. Louis ATU. Simple, but effective.
Actually I have considered a third option, Build it into a 50 Cal. Ammo
Box with room for a Battery pack and Transceiver Module.
The "QRP Commando" system. :^)

Thanks again to both you and Charlie, one of the best threads this year.

QRP DX TU (C) 1986 G.Danny Gingell, K3TKS@.abs.net

On Thu, 18 Jul 1996 ROYGREGSON@aol.com wrote:

> Hi Danny.....Gee...what have I started here ? Thanks for passing on the
> note from Charlie Lofgren. I gather that Charlie thinks I used his article &
> schematic for the tuner in the W6SAI book. Not true ! My first interest in
> the Z Match was from a series of articles in W6SAI's coulumn in CQ magazine in

> late 1993. I had built a breadboard version that worked good, and the compact
> version was done probably in November of 1993. Since others had sent in
> pictures of their Z Matches to Bill, I thought I'd send in a picture of mine
> too, and at the same time, I had written a Z Match article for publication in
> Hambrew, and I asked his permission to reference the CQ articles. I heard
> nothing back from Bill for quite awhile untill one day a letter arrived, and
> Bill applogized for not getting back sooner, but he had been going through a
> bad experience, his wife had passed away. He mentioned nothing about the Z
> Match picture, but gave full permission to use any part of the CQ articles.
> So that was the last I had heard from him. In the meantime, I had asked
> George at Hambrew to hold the article because The dual section capacitor
> supply had ran out and it would be unavailable if someone wanted to reproduce
> the tuner. In the meantime, I have moved, and updated my computer. I have
> lost the original article, must be on the old computer in storage. George is
> going to send me a copy of the article so I may update it, but has not done
> so yet !
> The thing that Charlie refered to in Hambrew, is a Z Match that george put
> together from parts I had sent him. Somehow, I had never received that copy
> of Hambrew, and again George was going to send me a copy, still not here. The
> parts and schematic I had sent George came from an article in Sprat # 84
> Autumn 1995, P9, A single coil Z Match ATU. This was the first I had seen
> using a toroid. This is the basic schematic of the low power version I sent
> to you. It uses the poly caps, and works quite well. I later seen the article
> in Qrp Quartely by Charlie using a toroid and different connections. He used
> a 130-6 core and the Sprat Z Match by G3WQW used a 130-2. Charlies article
> was impressive, so I thought I'd try it. I made all the tests he suggested,
> with the T130-6 & the T130-2, measured the current in both legs of the
> feedline thru the different windings, using a WW2 surplus RF ammeter and a RF
> current probe. There were some slight improvements in the RF current, but so
> small that the guy at the other end could never tell the difference. At best,
> on 80M it was .75A vs .8A. The biggest difference was that Charlies version
> seems a little more difficult to build, and would not give me a 1 to 1 match
> on all bands with my horizontal quad loop, which the T130-2 did. I was also
> using the poly caps which I don't think he had used in his version. Anyway, I
> went back to the Sprat version, with some additions, works good for me.
> I've been thinking of a "mini-kit" suppling the T130-2 and the poly caps.
> Maybe some wire too. What do you think, would QRPers like it ? It is very
> small, and could fit into many QRP rigs. I think I have Some extra parts. I
> was going to send some to Bob Gobrick to see what he thinks, sorta of a beta
> test ! Would you be interested to give it a try ? I see that I'm rambeling
> again...Cul Roy
>
>

From: ae4ic@nr.infi.net (BOB KELLOGG)
Subject: [1294] Re: Z Match
Message-ID: <199607191855.0AA26659@mh004.infi.net>

Hi Roy,

Since the Z-match thread has come up again, thought I'd put my two cents worth in the pot.

As you know, I built the Z-match, using your circuit, and found it to work well.

I used it with my G5RV and W3EDP and was able to get a good match on all bands (except 160M where it was not tried) Then I modified it slightly to be more like Charlies circuit, just to see if there was a major difference. I've not found much difference in practical use. (no instrument testing, just trying) We (the Knightlites) used the tuner on field day to tune one of the 40M magnetic loops designed by paul, AA4XX. It's been sitting on my workbench, mainly because I've not built a meter into it yet, and it's a little bit of a nuisance to hook up with my WM-1.

I would urge you to go ahead with your kit idea, but definitely include a meter circuit, noise bridge, or some means to tell when the match is achieved. (I want to try a noise bridge, myself, but just haven't taken the time to work it out)

The Z-Match as you have designed it has several advantages:
First, the circuit is simple. Even winding the toroid does not require the usual dozen or so taps.
Second, it is easy and fast to use. The fact that there is no inductor to switch eliminates one of the controls that appear on most ATUs.
Third, it is small. The small plastic capacitors must be no more than 20% the size of the usual metal capacitors. The non-tapped toroid is smaller than air wound or tapped coils. My version, including the meter circuit, will take up about half the volume of my current workhorse, the St. Louis tuner.

Within the next few days, I'll hook it up and try to tune all of the bands with my Big Loop. That will pretty much cover the range of antennas, long wire, G5RV, and Big Loop.

All this talk about a Wilderness package for QRP gear makes me think about putting this circuit right into the rig. - If you offered it as a kit, you might want to make the case optional, so it could be custom installed.

CUL,

Bob Kellogg, AE4IC
Prolably, but not nececelery. - Benny Hill

AE4IC TMPS 1996 QS=61 States=11 Confirmed=3 DX=29

AL,KS,MD,MI,NC,NH,NY,OH,PA,TN, TX

3B8,9A,DL,EI,EK,F,FG,G,GM,GU,HA,HB,K,LU,LZ,OH,OK,ON,P4,SH,SP,TI,UA,UR,VE,XE,
YO,YS,YU